

REMARKS

The present Amendment amends claims 13 and 15 and leaves claims 14, 16 and 17 unchanged. Therefore, the present application has pending claims 13-17.

The disclosure stands objected to due to informalities noted by the Examiner in paragraph 2 of the Office Action. Various amendments were made throughout the specification to correct the informalities noted by the Examiner and other minor errors grammatical and editorial in nature discovered upon review. Therefore, this objection is overcome and should be withdrawn.

In paragraph 3 of the Office Action the Examiner alleges that the specification has not been checked to the extent necessary to determine the presence of all possible minor errors. As indicated above, the specification was reviewed and minor errors grammatical and editorial in nature discovered upon such review were corrected. The Examiner's cooperation is respectfully requested to identify any errors the Examiner may be aware of so that such errors may be immediately corrected to expedite prosecution of the present application.

Claims 13-17 stand rejected under 35 USC §103(a) as being unpatentable over Laubach (U.S. Patent No. 6,028,860) in view of Han (U.S. Patent No. 6,009,097). This rejection is traversed for the following reasons. Applicants submit that the features of the present invention as now more clearly recited in claims 13-17 are not taught or suggested by Laubach or Han whether taken individually or in combination with each other as suggested by

the Examiner. Therefore, Applicants respectfully request the Examiner to reconsider and withdraw this rejection.

Amendments were made to each of the claims so as to more clearly describe features of the present invention not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the features of the present invention as now more clearly recited in the claims are not taught or suggested by Laubach or Han whether taken individually or in combination with each other as suggested by the Examiner.

Amendments were made to the claims so as to more clearly recite that the present invention is directed to a method of switching internet protocol (IP) packets at a packet switching system. Particularly, according to the present invention, a pair of an IP address and a port number and transmission control protocol (TCP) or user datagram protocol (UDP) are allocated to a virtual channel identifier (VCI) and IP packets whose headers have the IP address and the port number are output via a virtual connection (VC) corresponding to the VCI when the packet switching system receives the IP packets.

According to the present invention if the IP headers have a certain part identical with previously input packets, the allocated VCI is the same as a VCI allocated to the previously input IP packets and if the certain part of the IP packet headers is different from the previously inputted IP packets, then the allocated VCI is an idle VCI.

Further, according to additional features of the present invention, the VC is included in a virtual path and the IP packets are transmitted, not

according to the VCI, but according to a virtual path identifier (VPI) of the virtual path in an ATM network.

The above described additional features of the present invention regarding the virtual connection being included in a virtual path are described, for example, in the passage beginning on page 42, line 20 through page 43, line 12.

Thus, the present invention as now more clearly recited in the claims provides that a first IP packet is allocated a VCI and the next IP packet shares the same part of the header as the first IP packet such that the next IP packet included in subsequent packets is allocated the same VCI. Further, according to the present invention as more clearly recited in the claims, in the ATM network switching is performed based, not on the VCI, but on the virtual path identifier (VPI).

Accordingly, since the next packet is transferred based, not on the VCI, but on the VPI in the ATM network, the present invention makes it unnecessary to provide cut-through paths for each of the ATM routers/switches composing the ATM network.

The above described features of the present invention now more clearly recited are not taught or suggested by any of the references of record whether taken individually or in combination with each other. Particularly, the above described features of the present invention are not taught or suggested by Laubach or Han.

Laubach teaches a bi-directional communication system in a CATV network utilizing cell based ATM transmission. As per Laubach, packet data existing in any one of several different formats are first converted into ATM

cells by a head-in controller and individual cells are then assigned a virtual connection. In Laubach, based on the virtual connection, the cells can be prioritized and routed to their intended destinations.

At no point is there any teaching or suggestion in Laubach of the above described features of the present invention now more clearly recited in the claims wherein switching is performed based, not on the VCI, but on the VPI thereby making it unnecessary to provide cut-through paths for each of the ATM routers/switches composing the ATM network. In fact, at no point is there any teaching or suggestion in Laubach that is intended to address the disadvantages of conventional apparatus to which the present invention as recited in the claims overcomes.

Thus, Laubach fails to teach or suggest that the VC is included in a virtual path and the IP packets are transmitted, not according to the VCI, but according to a virtual path identifier (VPI) of the virtual path in an ATM network as recited in the claims.

The above described deficiencies of Laubach or not supplied by Han. Therefore, combining the teachings of Laubach and Han in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims.

Han teaches a system using ATM switches wherein VCI allocation is carried out for cut-through paths in an ATM router. However, at no point is there any teaching or suggestion in Han as to the exact nature and information used for switching IP packets in the ATM router. Thus, since no teaching can be found in Han as to what information is used for performing switching in the ATM router, it follows that Han does not teach or suggest the

features of the present invention as now more clearly recited in the claims wherein switching is performed based, not on the VCI but, on the VPI. As described above, the present invention by performing switching, not on the VCI, but on the VPI makes it unnecessary to provide cut-through paths for each of the ATM routers/switches composing the ATM network contrary to that taught by Han.

Thus, Han fails to teach or suggest that the VC is included in a virtual path, and the IP packets are transmitted, not according to the VCI, but according to a VPI of the virtual path in an ATM network as recited in the claims.

Therefore, both Laubach and Han suffer from the same deficiencies relative to the features of the present invention as now more clearly recited in the claims. Accordingly, combining the teachings of Laubach and Han in the manner suggested by the Examiner in the Office Action still fails to teach or suggest the features of the present invention as now more clearly recited in the claims. In light of such, Applicants respectfully request the Examiner to reconsider and withdraw the 35 USC §103(a) rejection of claims 13-17 as being unpatentable over Laubach in view of Han.


The remaining references of record have been studied. Applicants submit that they do not supply any of the deficiencies noted above with respect to the references utilized in the rejection of claims 13-17.

In view of the foregoing amendments and remarks, applicants submit that claims 13-17 are in condition for allowance. Accordingly, early allowance of claims 13-17 is respectfully requested.

To the extent necessary, the applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of MATTINGLY, STANGER, MALUR & BRUNDIDGE, P.C., Deposit Account No. 50-1417 (520.36259CX1).

Respectfully submitted,

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